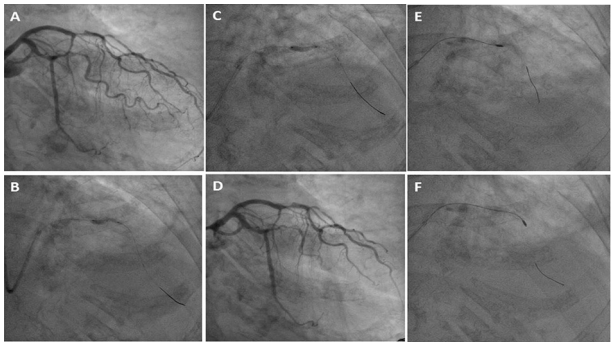
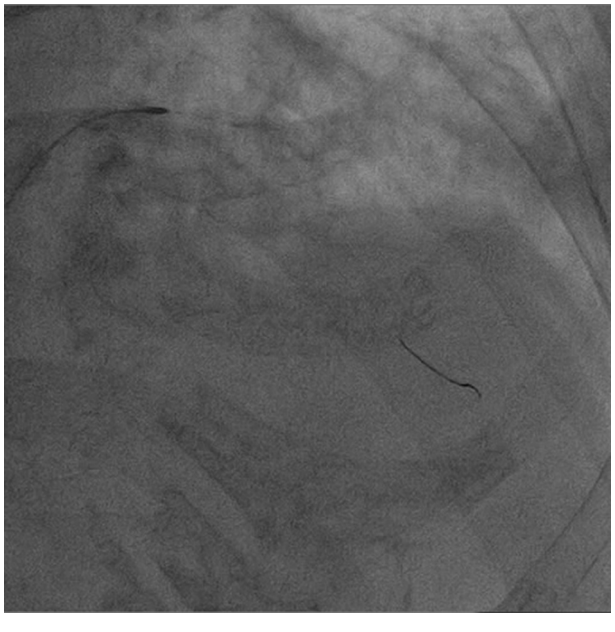
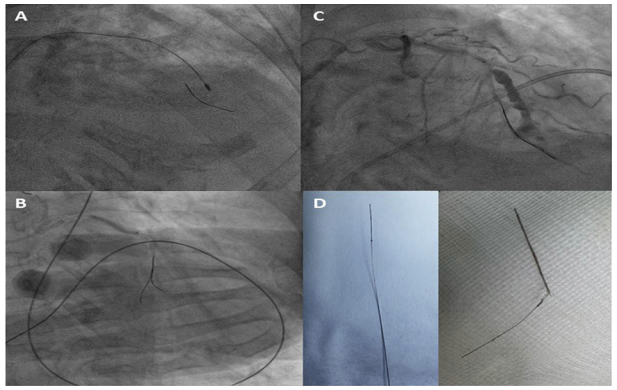


Relevant test results prior to catheterization. One month later, angina with elevated cardiac enzymes developed again and she was admitted for coronary intervention again.

[INTERVENTIONAL MANAGEMENT]

Procedural step. The coronary angiography was arranged. It revealed severe restenosis in the proximal part of previous LAD stent (Figure 1D). We decided to do the rotablation. We used a 1.25mm burr at first. Due to the previous under-expanded stent, in order to pass the middle lesions of LAD, four ablation runs were made at 190,000 rpm with 5000 RPM drops for 15 sec each time (Figure 1E). After passing the middle lesion, there was still a severe calcified lesion in the distal LAD (Figure 1F). So, we kept using the same burr. Approximately 10 sec into the second ablation run, the burr went outside the rail of Rotawire into pericardial space and caused coronary perforation (Figure 2A, Video 1). The patient began to shock. In order to occlusion blood flow to perforation, the additional soft guidewire and balloon was advanced into distal LAD with balloon inflation in the middle part of LAD (Figure 2B). Injection of dye revealed extravasation into pericardial space (Figure 2C, Video 2). The emergent pericardiocentesis was done through subxiphoid space by the echocardiographic guidance and at least 200 cc fresh blood was been drained. After previous procedures, her hemodynamic condition became relative stable and the emergent bypass surgery was arranged. However, the fracture fragment could not been found during the operation. Six days later, repeat angiography was done and found the residual wire fragment within the distal LAD. The fragment was removed successfully by the snare (Figure 2D).





Case Summary. We have presented a case of Rotawire transection caused by rotational atherectomy in a highly angulated lesion. The angulation may cause the distortion of wire and made the distal end of the burr to directly contact on the wire, thus exposing the wire to excessive friction. After several times ablation runs, the wire was transected and the burr was free to pass through the vessel. In conclusion, this case illustrates the importance of selection of lesions for rotablation. However, we still sometimes need to use the rotablation in lesions with many high-risk features. At that time, a well back-up plan of potential life-threatening complications is also mandatory.

TCTAP C-038

Insight from Serial Treatment with Excimer Laser, Scoring Balloon, Paclitaxel Coated Balloon for In-Stent Restenosis of Drug Eluting Stent

Tomohiko Watanabe,[1] Daitarou Kanno,[1] Yutaka Tadano,[1] Ken Kobayashi,[1] Yoshifumi Kashima,[2] Tsutomu Fujita[1]
[1]Sapporo Cardiovascular Clinic, Japan; [2]Sapporo Cardio Vascular Clinic, Japan

[CLINICAL INFORMATION]

Patient initials or identifier number. YH

Relevant clinical history and physical exam. A 58-year-old woman with past history of angina pectoris represented due to recurrence of her

chest pain at rest in April 2014. She received percutaneous coronary intervention with everolimus eluting stent implantation for proximal left anterior descending artery three years ago. We assumed it was unstable angina pectoris from several data. Then, emergency coronary angiography and coronary intervention were performed. Physical Exam: Blood pressure 110/74 mmHg, Heart rate 94/min.

Relevant test results prior to catheterization. Blood test: WBC5410/μL, RBC450×104/μL, HGB14.8g/dL, HCT44.7%, PLT24.8×104/μL, TP7.8g/dL, ALB4.7g/dL, T.Bil0.5mg/dL, AST25U/L, ALT26U/L, γGTP291U/L, BUN11.5mg/dL, Cre0.84mg/dL, UA6.5mg/dL, Na144mEq/L, Cl102mEq/L, K4.0mEq/L, Tchol244mg/dL, HDL-C62mg/dL, LDL-C158mg/dL,TG99mg/dL, Glu129mg/dL, HbA1c(NGSP)5.3%, eGFR54ml/min/1.73m^2

ECG: sinus rhythm, no significant ST-T change

UCG: Left Ventricular Ejection Fraction 68%(Teicholz), No Asynergy, Mitral/Pulmonary/Tricuspid Valve Trivial Regurgitation

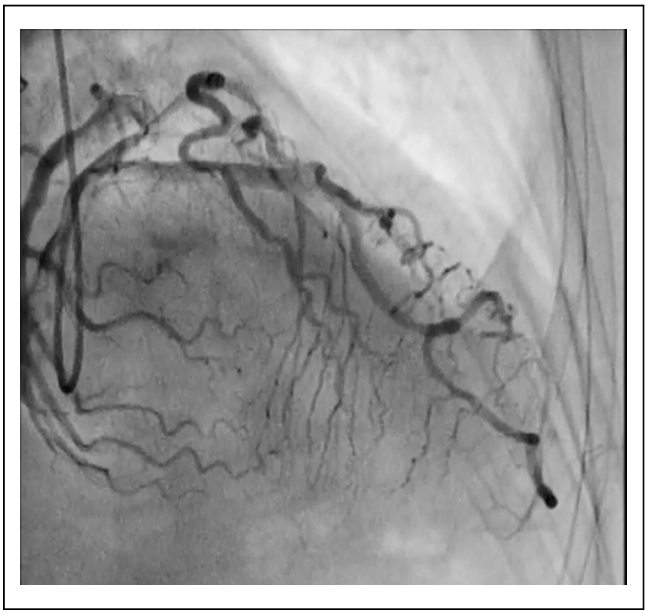
Relevant catheterization findings. Severe stenosis in the evelorimus eluting stent of proximal left anterior descending artery.

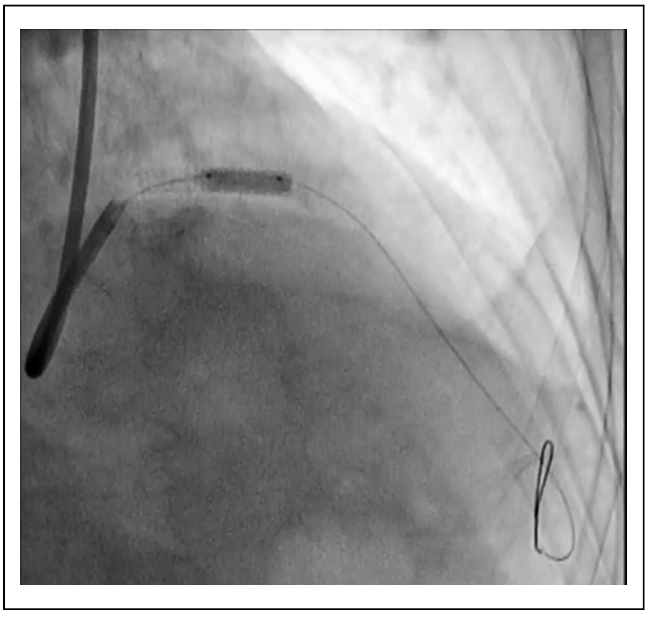
(In-stent restenosis: ISR)

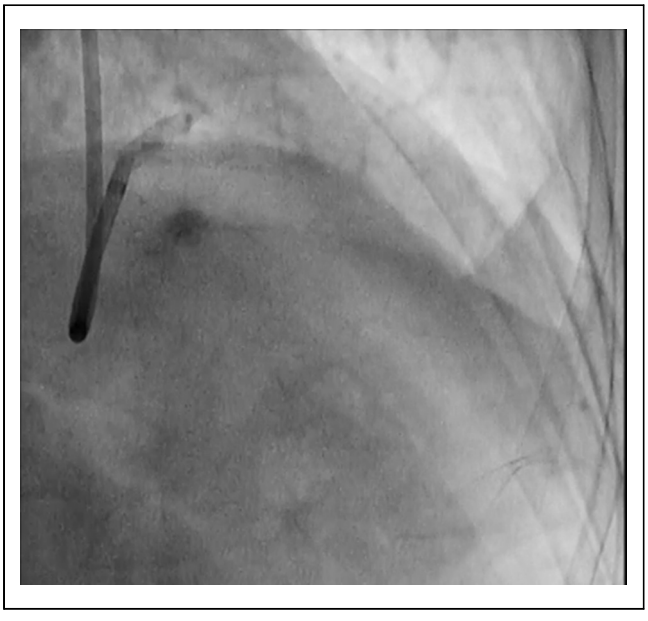
No significant stenosis in right coronary artery and left circumflex artery.

[INTERVENTIONAL MANAGEMENT]

Procedural step. Emergency coronary angiography and coronary intervention were performed. Coronary angiogram found severe stenosis in the everolimus eluting stent (EES) of proximal left anterior descending artery. We inserted 8Fr. long sheath from right femoral artery, engaged guiding catheter on left coronary ostium, and passed through the lesion with guide wire. In addition, optical frequency domain imaging (OFDI) revealed heterogeneous low intensity neointima in the middle of the EES. The EES dilated well and the lumen was occupied with such neo-intima. Therefore, we selected excimer laser to remove neo-intima as much as possible and to obtain the lumen. Rotational arthelectomy with excimer laser dramatically reduced the neo-intimal burden. OFDI showed the reduction of neointima well. At next, scoring balloon dilated the lesion at 14atm. OFDI showed enough acute gain of the lumen. And finally, paclitaxel coated balloon (PCB) coated the drug on the lesion at 12atm. Our serial treatment with excimer laser, scoring balloon, and PCB helped her recover without any stent placement or occurrence of sequelae.







Case Summary. ISR treatment remains challenging. As reported by several studies, PCB is a valid device for the treatment not requiring an additional layer of metal. It shows good results for ISR of bare metal stent, however, not as much for ISR of drug eluting stent (DES). Materials creating neo-intima in DES is not clearly identified, yet predicted to be extracellular matrix and thrombus. It is likely that PCB, which has cytotoxic effects, has less inhibition of neo-intimal proliferation of ISR of DES. Thus, the reduction of plaque burden is essential. We suggest excimer laser have advantage for the purpose. To clarify the effectiveness of using excimer laser before PCB is our task to be solved.

TCTAP C-039

Coronary Pseudoaneurysm After Transluminal Coronary Rotational Atherectomy

Wei Wu,[1] Yining Wang,[1] Shuyang Zhang,[1] Zhunjun Shen[1]
[1]Peking Union Medical College Hospital, China

[CLINICAL INFORMATION]

Patient initials or identifier number. QPJ

Relevant clinical history and physical exam. A 76-year-old male was hospitalized for sever months' chest discomfort on exertion and 12